

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

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**SECOND NOTICE OF PROPOSED MODIFICATION TO****CALIFORNIA CODE OF REGULATIONS****TITLE 8: Chapter 4, Subchapter 4, Article 6, Section 1541
of the Construction Safety Orders****Excavations, General Requirements**

Pursuant to Government Code Section 11346.8(c), the Occupational Safety and Health Standards Board (Standards Board) gives notice of the opportunity to submit written comments on the above-named standards in which modifications are being considered as a result of public comments and/or Board staff consideration.

On October 3, 2006, the Standards Board issued a Notice of Proposed Modifications containing revisions to Title 8, Section 1541 of the Construction Safety Orders, California Code of Regulations. The Standards Board received written comments on the proposed revisions. The standards have been further modified as a result of the comments and Board consideration.

A copy of the full text of the standard as originally proposed, and a copy of the modified text clearly indicating the further modifications, is attached for your information. In addition, a summary of all written comments regarding the Notice of Proposed Modifications and staff responses is included.

As a result of further Board consideration, this modified rulemaking proposal contains non-substantive, editorial formatting of proposed language to improve clarity and readability, grammatical revisions, and revisions to ensure consistency among the proposal, Chapter 651 of the Statutes of 2006, and the portions of Government Code Sections 4216 - 4216.9 that are not amended pursuant to Chapter 651.

ADDITIONAL DOCUMENT RELIED UPON

Statutes of 2006, Chapter 651.

This document is available for review Monday through Friday from 8:00 a.m. to 4:30 p.m. at the Standards Board Office located at the address listed below.

Any written comments on these modifications must be received by 5:00 p.m. on December 29, 2006, at the Occupational Safety and Health Standards Board, 2520 Venture Oaks Way, Suite 350, Sacramento, California 95833. These standards will be scheduled for adoption at a future business meeting of the Standards Board.

The Standards Board's rulemaking file on the proposed action is open to public inspection Monday through Friday, from 8:00 a.m. to 4:30 p.m., at the Standards Board's office at 2520 Venture Oaks Way, Suite 350, Sacramento, California 95833.

Inquiries concerning the proposed changes may be directed to the Executive Officer,
Keith Umemoto, at (916) 274-5721.

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date: December 11, 2006

Keith Umemoto, Executive Officer

STANDARDS AS ORIGINALLY PROPOSED

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

**PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4**

Amend Section 1541 to read as follows:

§1541. General Requirements.

(a) Surface encumbrances. All surface encumbrances that are located so as to create a hazard to employees shall be removed or supported, as necessary, to safeguard employees.

(b) Subsurface ~~Underground~~ installations.

(1) The ~~estimated approximate~~ location of ~~utility~~ subsurface installations, such as sewer, telephone, fuel, electric, water lines, or any other subsurface ~~underground~~ installations that reasonably may be expected to be encountered during excavation work, shall be determined by the excavator prior to opening an excavation.

(A) Excavation shall not commence until:

1. The excavation area has been marked as specified in Government Code Section 4216.2 by the excavator; and

2. The excavator has received a positive response from all known owner/operators of subsurface installations within the boundaries of the proposed project confirming that all known installation owner/operators have responded by locating their installations, advising of the location of their installation, or advising that the operator does not operate a subsurface installation that would be affected by the proposed excavation.

(B) When the excavation is proposed within 10 feet of, or in conflict with, a high priority subsurface installation, an onsite meeting involving the excavator and the subsurface installation owner/operator's representative shall be held to determine the action or activities required to verify the location of such installations. High priority subsurface installations are high pressure natural gas pipelines with normal operating pressures greater than 415 kPA gauge (60 p.s.i.g.), petroleum pipelines, pressurized sewage pipelines, high voltage electric supply lines, conductors or cables that have a potential to ground of more than 60,000 volts, or hazardous materials pipelines that are potentially hazardous to employees, or the public, if damaged.

(C) Only qualified persons may perform subsurface installation locating activities in accordance with this section and Government Code Sections 4216 through 4216.9. Persons who complete a training program in accordance with the requirements of Section 1509, Injury and Illness Prevention Program (IIPP), that meets the minimum training guidelines and practices of the Common Ground Alliance (CGA) Best Practices, Version 2.0, published December 2004, or the standards of the National Utility Locating Contractors Association (NULCA), Standard 101: Professional Competence Standards for Locating Technicians, 2001, First Edition, which are incorporated by reference, shall be deemed qualified for the purpose of this section.

(D) Employees shall be trained in the excavator notification and excavation practices required by this section and Government Code Sections 4216 through 4216.9.

STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

Amend Section 1541 to read as follows (continued):

(2) All Regional Notification Centers as defined by Government Code Section 4216(h) in the area involved and all known owners of ~~underground~~ subsurface facilities in the area who are not members of a Notification Center shall be advised of the proposed work at least 2 working days prior to the start of any digging or excavation work. EXCEPTION: Emergency repair work to ~~underground~~ subsurface facilities as defined in Government Code Section 4216(d).

(3) When excavation or boring operations approach the ~~estimated~~ approximate location of ~~underground~~ subsurface installations, the exact location of the installations in conflict shall be determined by safe and acceptable means that will prevent damage to the subsurface installation, as provided by Government Code Section 4216.4.

(4) While the excavation is open, subsurface ~~underground~~ installations shall be protected, supported, or removed as necessary to safeguard employees.

(5) An excavator discovering or causing damages to a subsurface installation shall notify the facility owner/operator or the regional notification center immediately. All breaks, leaks, nicks, dents, gouges, grooves, or other damages to an installation's lines, conduits, coatings or cathodic protection shall be reported.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code; and Section 4216, Government Code.

**STANDARDS AS PROPOSED IN FIRST 15-DAY
NOTICE OF MODIFICATIONS**
**(Modifications are indicated by bold, double underscore for
new language, and bold, strikeout for deleted language.)**

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

**PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4**

Amend Section 1541 to read as follows:

§1541. General Requirements.

(a) Surface encumbrances. All surface encumbrances that are located so as to create a hazard to employees shall be removed or supported, as necessary, to safeguard employees.

(b) Subsurface ~~Underground~~ installations.

(1) The ~~estimated~~approximate location of ~~utility~~ subsurface installations, such as sewer, telephone, fuel, electric, water lines, or any other subsurface ~~underground~~ installations that reasonably may be expected to be encountered during excavation work, shall be determined by the excavator prior to opening an excavation.

(A) Excavation shall not commence until:

1. The excavation area has been marked as specified in Government Code Section 4216.2 by the excavator; and

2. The excavator has received a positive response from all known owner/operators of subsurface installations within the boundaries of the proposed project confirming that all known installation owner/operators have responded by locating their installations, advising of the location of their installation, or advising that the operator does not operate a subsurface installation that would be affected by the proposed excavation.

(B) When the excavation is proposed within 10 feet of, ~~or in conflict with,~~ a high priority subsurface installation, **the excavator shall be notified by the facility owner/operator of the existence of the high priority subsurface installation before the legal excavation start date and time in accordance with Government Code Section 4216.2(a), and** an onsite meeting involving the excavator and the subsurface installation owner/operator's representative shall be **scheduled by the excavator and the owner/operator at a mutually agreed on time held** to determine the action or activities required to verify the location of such installations. High priority subsurface installations are high pressure natural gas pipelines with normal operating pressures greater than 415 kPA gauge (60 p.s.i.g), petroleum pipelines, pressurized sewage pipelines, ~~high voltage electric supply lines,~~ conductors or cables that have a potential to ground of more than 60,000 volts, or hazardous materials pipelines that are potentially hazardous to employees, or the public, if damaged.

(C) ~~Only~~Qualified persons ~~may~~ shall perform subsurface installation locating activities in accordance with this section and Government Code Sections 4216 through 4216.9. Persons who complete a training program in accordance with the requirements of Section 1509, Injury and Illness Prevention Program (IIPP), that meets the minimum training guidelines and practices of the Common Ground Alliance (CGA) Best Practices, Version **23.0**, published **December 2004, March 2006**, or the standards of the National Utility Locating Contractors Association (NULCA), Standard 101: Professional Competence Standards for Locating Technicians, 2001, First Edition, which are incorporated by reference, shall be deemed qualified for the purpose of this section.

STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

Amend Section 1541 to read as follows:

(D) Employees **who are involved in the excavation operation and exposed to excavation operation hazards** shall be trained in the excavator notification and excavation practices required by this section and Government Code Sections 4216 through 4216.9.

(2) All Regional Notification Centers as defined by Government Code Section 4216(h) in the area involved and all known owners of ~~underground~~ subsurface facilities in the area who are not members of a Notification Center shall be advised of the proposed work at least 2 working days prior to the start of any digging or excavation work. EXCEPTION: Emergency repair work to ~~underground~~ subsurface facilities as defined in Government Code Section 4216(d).

(3) When excavation or boring operations approach the ~~estimated approximate~~ location of ~~underground~~ subsurface installations, the exact location of the installations ~~in conflict~~ shall be determined by safe and acceptable means that will prevent damage to the subsurface installation, as provided by Government Code Section 4216.4.

(4) While the excavation is open, subsurface ~~underground~~ installations shall be protected, supported, or removed as necessary to safeguard employees.

(5) An excavator discovering or causing damages to a subsurface installation **immediately** shall notify the facility owner/operator or **contact** the regional notification center immediately **to obtain subsurface installation operator contact information**. All breaks, leaks, nicks, dents, gouges, grooves, or other damages to an installation's lines, conduits, coatings or cathodic protection shall be reported **to the subsurface installation operator**. **If the damage results in the escape of any flammable, toxic, or corrosive gas or liquid or endangers life, health or property, the excavator responsible shall immediately notify 911 and the facility owner/operator.**

NOTE: For the purposes of Section 1541(b), the term excavator refers to the excavating contractor and the term facility owner/operator or owner/operator refers to the subsurface installation owner/operator (e.g., utility company).

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code; and Section 4216, Government Code.

**STANDARDS AS PROPOSED IN SECOND 15-DAY
NOTICE OF MODIFICATIONS**

(Modifications are indicated by bold italics and double underscore for new language and bold double strikeout for deleted language.)

STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

Amend Section 1541 to read as follows:

§1541. General Requirements.

(a) Surface encumbrances. All surface encumbrances that are located so as to create a hazard to employees shall be removed or supported, as necessary, to safeguard employees.

(b) ~~Subsurface Underground~~ installations.

(1) The ~~estimated approximate~~ location of ~~utility~~ subsurface installations, such as sewer, telephone, fuel, electric, water lines, or any other ~~subsurface underground~~ installations that reasonably may be expected to be encountered during excavation work, shall be determined by the excavator prior to opening an excavation.

(A) Excavation shall not commence until:

1. The excavation area has been marked as specified in Government Code Section 4216.2 by the excavator; and

2. The excavator has received a positive response from all known owner/operators of subsurface installations within the boundaries of the proposed project; ***those responses confirm that the owner/operators have located their installations, and those responses either advise the excavator of those locations or advise the excavator that the owner/operator does not operate a subsurface installation that would be affected by the proposed excavation.*** ~~confirming that all known installation owner/operators have responded by locating their installations, advising of the location of their installation, or advising that the operator does not operate a subsurface installation that would be affected by the proposed excavation.~~

(B) When the excavation is proposed within 10 feet of, ~~or in conflict with,~~ a high priority subsurface installation, ***the excavator shall be notified by the facility owner/operator of the existence of the high priority subsurface installation before the legal excavation start date and time in accordance with Government Code Section 4216.2(a), and*** an onsite meeting involving the excavator and the subsurface installation owner/operator's representative shall be ***scheduled by the excavator and the owner/operator at a mutually agreed on time held to*** determine the action or activities required to verify the location of such installations. High priority subsurface installations are high pressure natural gas pipelines with normal operating pressures greater than 415 kPA gauge (60 p.s.i.g), petroleum pipelines, pressurized sewage pipelines, ***high voltage electric supply lines,*** conductors or cables that have a potential to ground of ~~more than~~ 60,000 volts ***or more,*** or hazardous materials pipelines that are potentially hazardous to employees, or the public, if damaged.

(C) ~~Only a~~ ***Only qualified persons may shall*** perform subsurface installation locating activities, ***and all such activities shall be performed*** in accordance with this section and Government Code Sections 4216 through 4216.9. Persons who complete a training program in accordance with the requirements of Section 1509, Injury and Illness Prevention Program (IIPP), that meets the minimum training guidelines and practices of the Common Ground Alliance (CGA) Best Practices, Version ~~23.0~~, published ~~December 2004, March 2006~~, or the standards of the National Utility Locating Contractors Association (NULCA), Standard 101: Professional

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PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

Competence Standards for Locating Technicians, 2001, First Edition, which are incorporated by reference, shall be deemed qualified for the purpose of this section.

(D) Employees **who are involved in the excavation operation and exposed to excavation operation hazards** shall be trained in the excavator notification and excavation practices required by this section and Government Code Sections 4216 through 4216.9.

(2) All Regional Notification Centers as defined by Government Code Section 4216~~(h)~~(j) in the area involved and all known owners of underground subsurface facilities in the area who are not members of a Notification Center shall be advised of the proposed work at least 2 working days prior to the start of any digging or excavation work. EXCEPTION: ~~Emergency~~ Repair work to underground subsurface facilities **done in response to an emergency** as defined in Government Code Section 4216(d).

(3) When excavation or boring operations approach the ~~estimated~~ approximate location of underground subsurface installations, the exact location of the installations **in conflict** shall be determined by safe and acceptable means that will prevent damage to the subsurface installation, as provided by Government Code Section 4216.4.

(4) While the excavation is open, subsurface ~~underground~~ installations shall be protected, supported, or removed as necessary to safeguard employees.

(5) An excavator discovering or causing damages to a subsurface installation **immediately** shall notify the facility owner/operator or **contact** the regional notification center **immediately to obtain subsurface installation operator contact information immediately after which the excavator shall notify the facility operator.** All breaks, leaks, nicks, dents, gouges, grooves, or other damages to an installation's lines, conduits, coatings or cathodic protection shall be reported **to the subsurface installation operator. If the damage to a high priority subsurface installation results in the escape of any flammable, toxic, or corrosive gas or liquid or endangers life, health or property, the excavator responsible shall immediately notify 911, or if 911 is unavailable, the appropriate emergency response personnel having jurisdiction, and the facility owner/operator shall also be contacted.**

NOTE: ~~For the purposes of Section 1541(b), the term excavator refers to the excavating contractor and the term facility owner/operator or owner/operator refers to the subsurface installation owner/operator (e.g., utility company).~~ The terms excavator and operator as used in Section 1541(b) shall be as defined in Government Code Section 4216(c) and (h) respectively. The term "owner/operator" means an operator as the term "operator" is defined in Government Code Section 4216(h).

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code; and Section 4216, Government Code.

SUMMARY AND RESPONSE TO COMMENTS

SUMMARY AND RESPONSE TO WRITTEN COMMENTS

Summary and Response to Written Comments to the 15-Day Notice of Proposed Modifications
Mailed on October 3, 2006.

Mr. Marshall Johnson, AT&T and Ms. Tara Haas, Engineering and Utility Contractors
Association (EUCA), California Regional Common Ground Alliance (CRCGA) Co-Chairs, by
letter dated October 19, 2006

Comment:

Ms. Haas and Mr. Johnson, representing the CRCGA, suggested modifying Section 1541(D)(5)[apparently meaning Section 1541(b)(5)], by using the language of Government Code (GC) section 4216.4(c) as set forth in Chapter 651 of the Statutes of 2006. Ms. Haas and Mr. Johnson also stated that with regard to Section 1541(b)(1)(B), no change to the Board's proposal is necessary.

Response:

The Board notes that the requirements of Section 1541(b)(5) are essentially the same as those contained in the chaptered GC section 4216.4(c), which becomes effective January 2007. Unlike GC section 4216.4(c), which contains permissive language with regard to the excavator responsibility to contact the regional notification center (RNC), the modified proposal requires the excavator to contact the RNC to obtain the identity of the subsurface installation owner/operator. The Board continues to believe in the importance of the excavator contacting 911 *and* the facility owner/operator in the event a high priority subsurface installation is damaged releasing hazardous materials into the environment which could expose workers and/or the general public.

The modified proposal is consistent with and meets the intent of GC section 4216.4(c) and therefore the Board believes the proposed modification is unnecessary.

Comment:

The CRCGA evaluated the proposed language for the Note to Section 1541(b)[Section 1541(b)(5)] and suggests it be deleted in favor of language to clarify to the employer the definitive distinction between excavator and facility owner/operator based on existing definitions contained in GC section 4216(c) and (h) respectively.

Response:

The Board concurs with the CRCGA representatives to use the definitions for excavator and facility operator contained in Chapter 651's version of GC section 4216(c) and (h) respectively.

The Board thanks Ms. Haas and Mr. Johnson for their comments and participation in the Board's rulemaking process.

Mr. Guy Prescott, Director of Safety, Operating Engineers, Local Union Number 3, by letter received on October 23, 2006

Comment:

Mr. Prescott's comment letter was subdivided into two distinct comments. In comment No. 1, Mr. Prescott stated that the modified proposal should recognize that smaller boring operations are now part of excavation operations. It may be useful to delineate between the Tunnel Safety Orders requirements for boring and Section 1541 to avoid any confusion between the scope of the respective safety orders. Mr. Prescott suggested Section 1541(b)(3) be further modified to include the phrase, "...which are not covered under the Tunnel Safety Orders," in the first sentence.

Response:

Mr. Prescott's comment relates to a portion of the proposal that was not proposed for modification as shown in the 15-Day Notice of Proposed Modifications, dated October 3, 2006, and is outside the scope of the proposed modifications. However, the Board staff will consider Mr. Prescott's comment for future rulemaking.

Comment:

In comment No. 2 which relates to Section 1541(b)(5), Mr. Prescott suggested further modification be made to include language that would require the employer to contact the appropriate emergency response personnel having jurisdiction as an alternative to contacting 911. Mr. Prescott stated the suggested modification is needed in case the excavation operation takes place in an area not served by 911.

Response:

The Board concurs with Mr. Prescott and believes it is reasonable to speculate that there may be areas of California that are so remote that 911 is not reachable either through landline or cellular telephone. In such cases, the only way for the entity performing the excavation to report a release may be to contact a local jurisdiction first responder group (e.g., fire department, police) and then the facility owner/operator.

Consequently, the Board has modified the proposal to require the excavator to contact 911 or if 911 is not available in the area, the appropriate emergency response personnel having jurisdiction. The proposal has also been modified to specifically require the facility owner/operator to be contacted. The Board thanks Mr. Prescott for his comments and participation in the Board's rulemaking process.

Dr. Terry Thedell, CIH, CSP, Health and Safety Advisor, Sempra Energy Utilities (aka San Diego Gas and Electric) by letter dated October 20, 2006

Comment:

Dr. Thedell stated that the proposed modifications to the proposal are an overall improvement; however, there remains one concern which should be addressed. Dr. Thedell suggested adding the words “...to a *high priority subsurface installation*...” in the last sentence of Section 1541(b)(1)(D)(5)[most likely meaning Section 1541(b)(5)]. Dr. Thedell stated that it is necessary to restrict the obligation of the excavator to hazardous material releases from high priority subsurface installations rather than for every instance involving a minor escape of odorized natural gas to ensure that the timely response capacity of fire department crews and other first responders are not compromised.

Response:

The Board concurs with Dr. Thedell to the extent that the intent of the modification is to ensure that when damage occurs to a subsurface installation that contains a hazardous material that could subject workers and the general public to an unsafe/unhealthy exposure level, that prompt action to mitigate the release be taken. Consistent with Chapter 651’s amendment of GC section 4216.4, the Board proposes to modify Section 1541(b)(5) as recommended by Dr. Thedell.

The Board thanks Dr. Thedell for his comment and participation in the Board’s rulemaking process.